

WHAT IS CLAIMED IS:

1. A heat storage material composition comprising 20 to 100 % by weight of a heat storage material, 80 to 0 % by weight of a crystalline polyolefin (B) and 50 to 0 % by weight of an elastomer (C), and the heat storage material described above contains a side chain-crystalline polymer (A).

2. The heat storage material composition as described in claim 1, wherein the side chain-crystalline polymer (A) is a higher α -olefin polymer (a) containing 50 mole % or more of α -olefin having 10 or more carbon atoms.

3. The heat storage material composition as described in claim 1, wherein the heat storage material described above comprises the higher α -olefin polymer (a) containing 50 mole % or more of higher α -olefin having 10 or more carbon atoms and a petroleum wax (b) in which a melting point (T_m) is higher by 10°C or more than that of the polymer (a).

4. The heat storage material composition as described in claim 2 or 3, wherein the higher α -olefin polymer (a) satisfies the following (1) to

(3):

(1) a stereospecific index value M2 (mole %) is 50 mole % or more,

(2) a weight average molecular weight (Mw) reduced to polystyrene which is measured by gel permeation chromatograph (GPC) is 1,000 to 10,000,000, and a molecular weight distribution (Mw/Mn) is 1.2 to 4.0 and

(3) a peak observed from a melting endothermic curve obtained by maintaining the above polymer at 190°C for 5 minutes under nitrogen atmosphere by means of a differential scanning type calorimeter (DSC), then cooling down to -30°C at 5°C/minute, maintaining at -30°C for 5 minutes and then heating up to 190°C at 10°C/minute is single, and a melting heat amount (ΔH) calculated from an area of the peak is 30 (J/g) or more.

5. The heat storage material composition as described in claim 2 or 3, wherein the higher α -olefin polymer (a) satisfies at least one of the following (4a) to (4c):

(4a) a peak observed from a melting endothermic curve obtained by maintaining the above polymer at 190°C for 5 minutes under nitrogen atmosphere by means of a

differential scanning type calorimeter (DSC), then cooling down to -30°C at 5°C/minute, maintaining at -30°C for 5 minutes and then heating up to 190°C at 10°C/minute is single, and a melting point (T_m) at a peak top thereof is 20 to 100°C,

(4b) in measurement of spin-lattice relaxation time (T₁) by solid NMR measurement, single T₁ is observed in the melting point (T_m) or higher and

(4c) observed is a single peak X₁ originating in side chain crystallization observed at 15 deg<2θ<30 deg in measurement of wide-angle X ray scattering intensity distribution.

6. The heat storage material composition as described in claim 2 or 3, wherein the higher α-

olefin polymer (a) satisfies the following (5):

(5) a half band width (W_m) observed from a melting endothermic curve obtained by means of a differential scanning type calorimeter (DSC) is 10°C or lower.

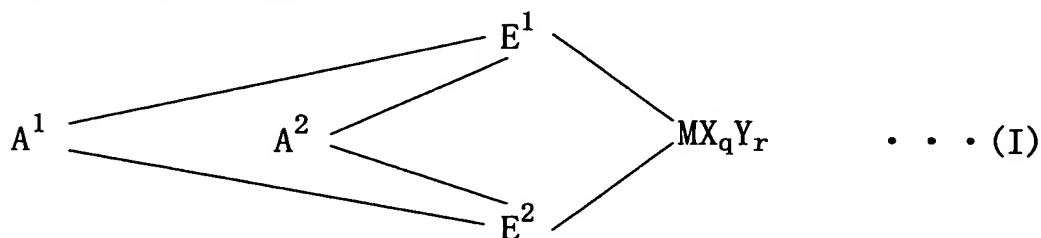
7. The heat storage material composition as described in claim 2 or 3, wherein the higher α-olefin polymer (a) is obtained by polymerizing higher α-olefin in the presence of a catalyst for polymerization containing at least one kind of a

component selected from:

(D) a transition metal compound represented by the following Formula (I),

(E) (E-1) a compound which can form an ionic complex by reacting with the transition metal compound of the above component (D) or a derivative thereof and

(E-2) aluminoxane:



wherein M represents a metal element of the 3rd to 10th group in the periodic table or a lanthanoid series; E^1 and E^2 each represent a ligand selected from a substituted cyclopentadienyl group, an indenyl group, a substituted indenyl group, a heterocyclopentadienyl group, a substituted heterocyclopentadienyl group, an amide group, a phosphide group, a hydrocarbon group and a silicon-containing group, and they form a cross-linking structure via A^1 and A^2 and may be the same as or different from each other; X represents an α -bonding ligand, and when plural X's are present, plural X's may be the same or different and may be cross-linked with other X, E^1 , E^2 or Y; Y represents a Lewis base,

and when plural Y's are present, plural Y's may be the same or different and may be cross-linked with other Y, E¹, E² or X; A¹ and A² are divalent cross-linking groups bonding two ligands and represent a hydrocarbon group having 1 to 20 carbon atoms, a halogen-containing hydrocarbon group having 1 to 20 carbon atoms, a silicon-containing group, a germanium-containing group, a tin-containing group, -O-, -CO-, -S-, -SO₂-, -Se-, -NR¹-, -PR¹-, -P(O)R¹-, -BR¹- or -AlR¹-; R¹ represents a hydrogen atom, a halogen atom, a hydrocarbon group having 1 to 20 carbon atoms or a halogen-containing hydrocarbon group having 1 to 20 carbon atoms, and they may be the same as or different from each other; q is an integer of 1 to 5 and represents [(valence of M) - 2], and r represents an integer of 0 to 3.

8. The heat storage material composition as described in claim 1, wherein the crystalline polyolefin (B) is at least one selected from a polyethylene base resin and a polypropylene base resin.

9. The heat storage material composition as described in claim 1, wherein the elastomer (C) is at

least one selected from an olefin base elastomer and
a styrene base thermoplastic elastomer.